

MONTHLY WEATHER REVIEW, JULY, 1875.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE

INTRODUCTION.

The current Weather Review is compiled from information furnished by eighty-five regular United States Signal Service Stations, twelve Canadian Stations, seventeen U. S. Army Surgeons, one Naval Hospital, two hundred and sixty-nine Volunteer Observers, and from newspaper reports of weather and storm-phenomena.

The chief features of the month's meteorology were: (1) The frequency and destructiveness of local storms and tornadoes in the interior and trans-Mississippi sections of the country, greatly impeding travel and transportation, and inflicting serious damage upon the turnpikes and railroads, and loss of property in many towns and cities, as well as causing great disaster to all growing crops and grain standing in the fields. (2) The extremely high mean temperature in the South Atlantic and Gulf States, and also the prolonged drought in the cotton producing belt. (3) The low temperature in the Upper Lake region. (4) The extraordinary precipitation in the Ohio valley and Tennessee and the districts to the northwestward, preparing the way for the serious and destructive freshets and floods, which ensued after the month of July closed. (5) The scarcity of auroral displays. (6) The encouragingly few reports of grasshoppers and locusts in the agricultural districts.

ATMOSPHERIC PRESSURE.

The average monthly distribution of pressure is given on Chart No. II. From this it will be seen that the highest mean pressure, as usual for July, was in the South Atlantic and East Gulf States—where, also, prevailed the highest temperatures. The area of lowest mean barometer was in the Northwest.

(1.) *Areas of High Barometer.*—There were, during the month, five well-defined areas of high barometer, which, with one exception, came from the Northwest and Lake region; the last of these was of great importance in determining the serious weather-conditions of the two last days in July.

I. On the last day of June, a decided area of high pressure (noticed in the June Weather Review) progressed over the Lake region in a southeastward direction, and made itself felt on the 1st of July, by cool and generally cloudy weather, over all sections north of the Ohio valley, and in the Middle States, except Virginia. There were frequent rains following this area in the Lake region, and southwestward to Missouri and Tennessee. This high barometer passed off the Middle Atlantic coast on the 2d and 3d of July; but, after so doing, it worked along the coast southwardly, and with accessions of pressure off the South Atlantic coast, remained nearly stationary there for several days, but unaccompanied by any peculiar circumstances.

II. On the 6th another decided area of high barometer was reported from the upper Mississippi valley and the Northwest, producing a general reduction of temperature everywhere north and west of the Ohio valley. This area became most clearly marked and central in Minnesota on the morning of the 7th, when the unusually high